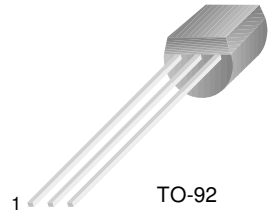
FAIRCHILD
SEMICONDUCTOR®

MPS651

Switching and Amplifier Applications



TO-92

1. Emitter 2. Base 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

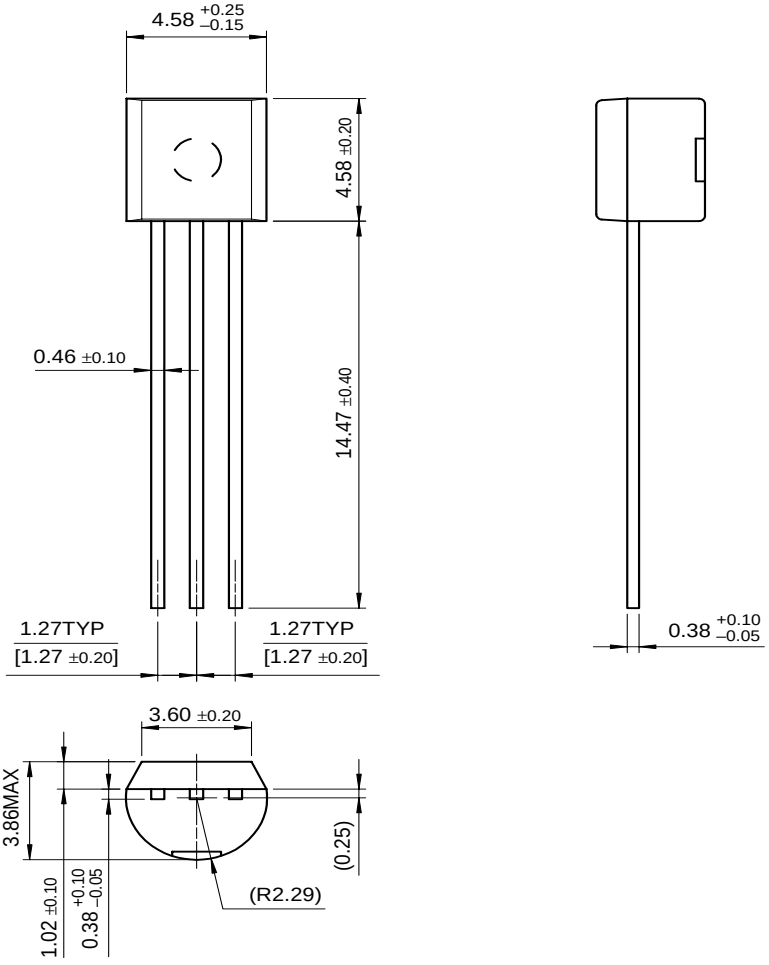
Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	0.8	A
P_C	Collector Dissipation	625	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Voltage	I_C=100μA, I_E=0	80			V
BV_{CEO}	Collector-Emitter Voltage	I_C=10mA, I_B=0	60			V
BV_{EBO}	Emitter- Base Voltage	I_C=10μA, I_C=0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB}=80V, I_E=0			0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}=4.0V, I_C=0			0.1	μA
h_{FE1} h_{FE2} h_{FE3} h_{FE4}	DC Current Gain	V_{CE}=2V, I_C=50mA V_{CE}=2V, I_C=500mA V_{CE}=2V, I_C=1.0A V_{CE}=2V, I_C=2.0A	75 75 75 40			
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=1.0A, I_B=100mA I_C=2.0A, I_B=200mA			300 500	mV
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C=1.0A, I_B=100mA			1.2	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}=2.0V, I_C=1.0A			1.0	V
f_T	Current Gain Band Width Product	V_{CE}=5.0V, I_C=50mA, f=100MHz	75			MHz

Package Dimensions

TO-92



Dimensions in Millimeters

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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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